04/26/2010 MON 18:12 FAX 7243875021 Philips Healthcare ☑003/016

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) [[A]] An apparatus comprising:

a device;

an arm assembly having a first end connected to a fixed support and a second end connected to the device, said arm assembly being having actuating means for positioning the device;

a sensor configured to detect and provide information about a subject within a sensing range of the device sensor, the subject having eyes, and the sensor being calibrated with a location of the subject corresponding to a position and orientation of a midpoint of the eyes; and

a processor configured to process said information, the processor further being configured to (i) determine a current location of the subject in response to the processed information, (ii) determine a first location, corresponding to an optimal position based on the current location of the subject, for use of the device by the subject, wherein a top of the device is aligned with the midpoint of the eyes of the subject, and (iii) control the actuating means to move the arm assembly to position the device at a second location proximate relative to the first location within a configuration space of allowable device positions and taking into account movement restraints and nearby obstacles, the second location further corresponding to an achievable position within the configuration space nearest the optimal position.

2. (Original) The apparatus of claim 1, wherein the first location and the second location are the same.

3. (Original) The apparatus of claim 1, wherein the processor determines a path of the

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movement of the arm assembly to the second location using inverse kinematics.

4. (Original) The apparatus of claim 1, wherein the processor determines a path of the movement of the arm assembly to the second location using path planning.

5. (Original) The apparatus of claim 1, wherein the processor determines the second location using inverse kinematics.

6. (Original) The apparatus of claim 1, wherein the fixed support is a single point.

7. (Original) The apparatus of claim 6, wherein the fixed support is a pole.

8. (Original) The apparatus of claim 1, wherein the device is a screen.

9. (Original) The apparatus of claim 8, wherein the screen is a shield.

10. (Original) The apparatus of claim 9, wherein the shield is a lens and thyroid protector.

11. (Original) The apparatus of claim 8, wherein the screen is a display screen.

12. (Original) The apparatus of claim 11, wherein the display screen is a video monitor.

13. (Original) The apparatus of claim 1, wherein the second location is chosen from two or more predetermined positions.

14. (Original) The apparatus of claim 1, wherein the processor causes the actuating means of the arm assembly to move the device to a rest position if the subject is not

detected.

15. (Original) The apparatus of claim 1 further comprising a second sensor, the second sensor being configured to detect the presence of a person who is not the subject and being operatively coupled to the arm assembly to prevent movement of the arm and the device if any said person who is not the subject is detected.

16. (Original) The apparatus of claim 1 wherein the first location is determined based on optimal viewing of the device.

17. (Original) The apparatus of claim 1 wherein the first location is determined based on optimal use of the device by the subject.

18. (Original) The apparatus of claim 1 wherein the first location is determined based on optimal viewing by the subject through the device.

19. (Original) The apparatus of claim 1 wherein the positions of the subject and device are monitored with respect to each other and a warning is displayed on a screen if certain changes in said positions are detected.

20. (Original) The apparatus of claim 1 wherein the positions of the subject and device are monitored with respect to each other and an alarm is activated if certain changes in said positions are detected.

21. (Currently Amended) A method for positioning a device comprising:

(a)   calculating a window of allowable <u>device</u> positions, the window taking into account (a1) movement restraints of an assembly configured to move the device and (a2) nearby obstacles (201);

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(b) calibrating a sensor with respect to a ~~first~~ user location, wherein the user has eyes, and wherein the sensor is calibrated with the user location corresponding to a position and orientation of a midpoint of the eyes ~~(202)~~;

(c) calculating an ideal position ~~(203)~~ of the device based upon ~~the~~ a first current user location, wherein the first current user location is calculated and determined from collected sensor data of the calibrated sensor, wherein the ideal position corresponds to an optimal position, based on the first current user location, for use of the device by the user, wherein a top of the device is aligned with the midpoint of the eyes of the user;

(d) calculating an achievable position within said window of allowable device positions nearest the ideal position taking into account the movement restraints and nearby obstacles ~~(204)~~; and

(e) moving the device within the window of allowable positions to the achievable position ~~(205)~~.

22. (Currently Amended) The method of claim 21 further comprising:

calculating ~~(206)~~ a second current user location from sensor data collected after the first current user location was determined;

comparing the second user location with a repositioning criterion;

repeating the step of calculating ~~(206)~~ a second user location from sensor data collected after the first user location was determined and comparing the second user location with the repositioning criterion, until the repositioning criterion is met ~~(209)~~; and

repeating steps (c) and (d) of claim 21 to calculate a second ideal position of the device based on the second user location and a second achievable position; and

moving the device within the window of allowable positions to the second achievable position ~~(205)~~.